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EXAMINER

TAYLOR, BARRY W

ART UNIT

PAPER NUMBER

2643

DATE MAILED: 02/23/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/746,505

Applicant(s)

BOEHMKE ET AL

Examiner

Barry W Taylor

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-12,14-16,18,19,21-30,32-35,39-42,44-46 and 48-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-12,14-16,18,19,21-30,32-35,39-42,44-46 and 48-50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date paper No(s) 6, 8-9.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 1, 3-12, 14-16, 18-19, 21-30, 32-35, 39-42, 44-46 and 48-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anand (5,426,688) in view of Dulman (6,018,567).

Regarding claim 1, 16, 18-19, 35, 42, 44 and 46. Anand teaches a system for capturing call processing failures in a telecommunication system occurring, comprising:  
establishing a communication link between a computing system and the telecommunication system (see figure 1 wherein the Switching Control Center #76

establishes a communication link between a computing system (MCC #72 figure 1) and the telecommunication system (#14, #16, #18, #20, #38 and #40 figure 1);

Anand does not show capturing the call processing failure data occurring at the telecommunication switch control processor in real-time.

Dulman teaches an arrangement for monitoring operations of intelligent elements of a public switched telephone network by using a Maintenance and Operations Console (MOC) that sends and receives standardized network management messages (SNMP protocol) across a data network that provides flexible monitoring of intelligent elements at different locations based on the use of SNMP object base (entire disclosure). Dulman discloses that the MOC monitors and detects errors in hardware, software, and software subsystems of an intelligent network element by receiving SNMP protocol messages from the intelligent element (columns 2-3). Dulman discloses the switching offices (#10 figures 1-2) are programmed to recognize identified events or points in call (PICs). Dulman discloses various alarms received from intelligent elements (columns 9-13). Dulman discloses using middleware monitor (see 66 figure 4C) used to detect errors in additional subsystems in the intelligent element so that all application systems may be monitored even though vendors fail to supply SNMP compliant elements (column 14). Dulman also discloses that sub-agents in the intelligent elements generate traps immediately upon detection of critical errors (column 14). Dulman discloses the MOC also comprises an object mapping system having a management information base (see MIB #70 figure 4C) that identifies object

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relationships for the object-based models of the network. For example, the SNMP agent may determine that the SNMP object identifies an AIX error "CPU utilization threshold exceeded" (column 15). Dulman further discloses that the MIB stores icon objects that have predetermined shapes and colors for identifying trap severity by icon colors (columns 15-16).

It would have been obvious for any one of ordinary skill in the art at the time of the invention to modify the invention as taught by Anand to use SNMP protocol messages as taught by Dulman for the benefit of monitoring and detecting errors in hardware and software for any network element as taught by Dulman.

Regarding claims 3, 21, 40 and 45. Anand teaches providing call processing failure data to an output device coupled to the computing system (col. 4 line 67 – col. 5 line 30, col. 6 lines 40-46, col. 7 lines 25-67).

Regarding claims 4, 22 and 41. Anand shows wherein the providing the captured data to an output device includes providing the captured data to any output device (see Critical Indicator Panel #82 figure 1 and Control Console #84 figure 1).

Regarding claims 5-6 and 23-24. Anand does not explicitly show wherein the captured data are provided to the output device in response to user-selected criteria.

Dulman teaches an arrangement for monitoring operations of intelligent elements of a public switched telephone network by using a Maintenance and Operations Console (MOC) that sends and receives standardized network management messages

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(SNMP protocol) across a data network that provides flexible monitoring of intelligent elements at different locations based on the use of SNMP object base (entire disclosure). Dulman discloses that the MOC monitors and detects errors in hardware, software, and software subsystems of an intelligent network element by receiving SNMP protocol messages from the intelligent element (columns 2-3). Dulman discloses the switching offices (#10 figures 1-2) are programmed to recognize identified events or points in call (PICs). Dulman discloses various alarms received from intelligent elements (columns 9-13). Dulman discloses using middleware monitor (see 66 figure 4C) used to detect errors in additional subsystems in the intelligent element so that all application systems may be monitored even though vendors fail to supply SNMP compliant elements (column 14). Dulman also discloses that sub-agents in the intelligent elements generate traps immediately upon detection of critical errors (column 14). Dulman discloses the MOC also comprises an object mapping system having a management information base (see MIB #70 figure 4C) that identifies object relationships for the object-based models of the network. For example, the SNMP agent may determine that the SNMP object identifies an AIX error "CPU utilization threshold exceeded" (column 15). Dulman further discloses that the MIB stores icon objects that have predetermined shapes and colors for identifying trap severity by icon colors (columns 15-16).

It would have been obvious for any one of ordinary skill in the art at the time of the invention to modify the invention as taught by Anand to use SNMP get command as

taught by Dulman (column 13) for the benefit of using traps to cause the MOC to poll intelligent agents.

Regarding claims 7, 25, 39 and 50. Anand does not show using TCP/IP communication link.

Dulman teaches an arrangement for monitoring operations of intelligent elements of a public switched telephone network by using a Maintenance and Operations Console (MOC) that sends and receives standardized network management messages (SNMP protocol) across a data network that provides flexible monitoring of intelligent elements at different locations based on the use of SNMP object base (entire disclosure). Dulman discloses that the MOC monitors and detects errors in hardware, software, and software subsystems of an intelligent network element by receiving SNMP protocol messages from the intelligent element (columns 2-3). Dulman discloses the switching offices (#10 figures 1-2) are programmed to recognize identified events or points in call (PICs). Dulman discloses various alarms received from intelligent elements (columns 9-13). Dulman discloses using middleware monitor (see 66 figure 4C) used to detect errors in additional subsystems in the intelligent element so that all application systems may be monitored even though vendors fail to supply SNMP compliant elements (column 14). Dulman also discloses that sub-agents in the intelligent elements generate traps immediately upon detection of critical errors (column 14). Dulman discloses the MOC also comprises an object mapping system having a management information base (see MIB #70 figure 4C) that identifies object

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relationships for the object-based models of the network. For example, the SNMP agent may determine that the SNMP object identifies an AIX error "CPU utilization threshold exceeded" (column 15). Dulman further discloses that the MIB stores icon objects that have predetermined shapes and colors for identifying trap severity by icon colors (columns 15-16).

It would have been obvious for any one of ordinary skill in the art at the time of the invention to modify the invention as taught by Anand to use SNMP protocol messages as taught by Dulman for the benefit of monitoring and detecting errors in hardware and software for any network element via using a standardized transport protocol, such as TCP/IP as taught by Dulman (column 4 line 53).

Regarding claims 8, 26 and 34. Anand does not explicitly show filtering .

Dulman teaches using a sieve daemon (see 94 figure 6) to perform filtering functions.

It would have been obvious for any one of ordinary skill in the art at the time of the invention to modify the invention as taught by Anand to use SNMP protocol messages as taught by Dulman for the benefit of monitoring and detecting errors via using the sieve daemon as taught by Dulman (figure 6 and column 16).

Regarding claims 9-12 and 27-30. Anand does not show using first and second set of logic instructions:

Dulman teaches using an UNIX server in the computing system (#32 figure 4B).

It would have been obvious for any one of ordinary skill in the art at the time of the invention to modify the invention as taught by Anand to use SNMP protocol messages as taught by Dulman for the benefit of using an open environment for monitoring and detecting errors in telecommunication system as taught by Dulman.

Regarding claims 14, 32 and 48. Claims 14, 32 and 48 do not contain any additional features, which, in combination with the features of claims 1, 16 and 46 would lead to a novel subject matter. The Examiner notes that broadcasting a paging signal, as defined in claim 14, 32 and 48, is an obvious measure to a person with ordinary skill in the art. For example, Anand teaches on detection of trigger condition (i.e. link or particular premises loss of communication), processor initiates notification to security system using coded signal or message clearly reading on sending paging signal when trigger condition met.

Furthermore, Dulman teaches an arrangement for monitoring operations of intelligent elements of a public switched telephone network by using a Maintenance and Operations Console (MOC) that sends and receives standardized network management messages (SNMP protocol) across a data network that provides flexible monitoring of intelligent elements at different locations based on the use of SNMP object base (entire disclosure). Dulman discloses that the MOC monitors and detects errors in hardware, software, and software subsystems of an intelligent network element by receiving SNMP protocol messages from the intelligent element (columns 2-3). Dulman discloses

the switching offices (#10 figures 1-2) are programmed to recognize identified events or points in call (PICs). Dulman discloses various alarms received from intelligent elements (columns 9-13). Dulman discloses using middleware monitor (see 66 figure 4C) used to detect errors in additional subsystems in the intelligent element so that all application systems may be monitored even though vendors fail to supply SNMP compliant elements (column 14). Dulman also discloses that sub-agents in the intelligent elements generate traps immediately upon detection of critical errors (column 14). Dulman discloses the MOC also comprises an object mapping system having a management information base (see MIB #70 figure 4C) that identifies object relationships for the object-based models of the network. For example, the SNMP agent may determine that the SNMP object identifies an AIX error "CPU utilization threshold exceeded" (column 15). Dulman further discloses that the MIB stores icon objects that have predetermined shapes and colors for identifying trap severity by icon colors (columns 15-16).

It would have been obvious for any one of ordinary skill in the art at the time of the invention to modify the invention as taught by Anand to use SNMP get command as taught by Dulman (column 13) for the benefit of using traps to cause the MOC to poll intelligent agents.

Regarding claims 15, 33 and 49. Anand does not show maintaining the call processing failure data and logging administration data associated with the captured call processing data to the storage device.

Dulman teaches an arrangement for monitoring operations of intelligent elements of a public switched telephone network by using a Maintenance and Operations Console (MOC) that sends and receives standardized network management messages (SNMP protocol) across a data network that provides flexible monitoring of intelligent elements at different locations based on the use of SNMP object base (entire disclosure). Dulman discloses that the MOC monitors and detects errors in hardware, software, and software subsystems of an intelligent network element by receiving SNMP protocol messages from the intelligent element (columns 2-3). Dulman discloses the switching offices (#10 figures 1-2) are programmed to recognize identified events or points in call (PICs). Dulman discloses various alarms received from intelligent elements (columns 9-13). Dulman discloses using middleware monitor (see 66 figure 4C) used to detect errors in additional subsystems in the intelligent element so that all application systems may be monitored even though vendors fail to supply SNMP compliant elements (column 14). Dulman also discloses that sub-agents in the intelligent elements generate traps immediately upon detection of critical errors (column 14). Dulman discloses the MOC also comprises an object mapping system having a management information base (see MIB #70 figure 4C) that identifies object relationships for the object-based models of the network. For example, the SNMP agent may determine that the SNMP object identifies an AIX error "CPU utilization threshold exceeded" (column 15). Dulman further discloses that the MIB stores icon objects that have predetermined shapes and colors for identifying trap severity by icon colors (columns 15-16).

It would have been obvious for any one of ordinary skill in the art at the time of the invention to modify the invention as taught by Anand to use SNMP protocol messages as taught by Dulman for the benefit of monitoring and detecting errors in hardware and software for any network element as taught by Dulman.

### ***Response to Arguments***

2. Applicant's arguments filed 12/12/03 have been fully considered but they are not persuasive.

a) Regarding Applicant's remark on page 13, second full paragraph, wherein Applicant's contend that Dulman fails to disclose or teach continually capturing call processing failure data.

Anand teaches interfaces and SPs are connected by two full duplex (i.e. bi-directional) channel data links which are continuously subject to testing so that when any interruption in communication link occurs an alarm signal is generated (abstract). Anand invention requires constant ready state (see background---columns 1-4). Anand column 5 indeed reveals "continuously" testing data link but fails to show testing within the switch. Dulman monitors and detects errors in hardware, software, and software subsystems of an Advanced Intelligent Network (AIN). In fact, Dulman discloses "real-time" monitoring of Interactive Voice Response (IVR) units (columns 9, 11) thereby maintaining subscriber services. Dulman even discloses using error log for monitoring IVR system (column 13). Dulman discloses generating traps "immediately" when critical error occurs (column 14).

b) Regarding Applicant's remark starting at the bottom of page 13 and continuing to the top of page 14 wherein Applicant's contend that Dulman fails to show "real-time".

First of all, Applicant's specification page 22 lines 13-14 reveal "real-time" is nothing more than "at the time of failure".

Dulman monitors and detects errors in hardware, software, and software subsystems of an Advanced Intelligent Network (AIN). In fact, Dulman discloses "real-time" monitoring of Interactive Voice Response (IVR) units (columns 9, 11) thereby maintaining subscriber services. Dulman even discloses using error log for monitoring IVR system (column 13). Dulman discloses generating traps "immediately" when critical error occurs (column 14).

c) Regarding Applicant's ending remark on page 14 wherein Applicant's contend Dulman fails to show "call transactions" for the call processing failure data.

The Examiner notes that Applicant's specification pg. 18, Ins. 8-27 directed towards cellular "handoff" and specification pg. 46, In. 17 – pg. 47, In 15 and Fig. 7 directed towards drop call due to cell coverage. The Examiner further notes that independent claims are still general in nature, in that, "call transactions" as pointed to by Applicant's are missing from the general claim language appearing in independent claims 1, 16, 35, 42 and 46 and Dulman "call transactions" relating to Interactive Voice Response units reads on the general claim language of "call processing failure data".

d) Next, Applicant's Argue that Dulman fails to show call data as raw, unprocessed format described in specification, pg. 28, In. 25 – pg. 29, In 7.

The Examiner notes that specification, pg. 28, ln. 25 – pg. 29, ln 7 directed towards cell failure types. Dulman shows cellular telephone calls (see 12d making wireless 14b connection).

e) Applicant's end remarks by repeating the remarks found in section a) listed above and further pointing to specification pages 27-28.

The Examiner notes that Applicant's specification pages 27-28 are directed towards using a trigger condition that uses paging signal to notify when particular failure occurs. Anand teaches interfaces and SPs are connected by two full duplex (i.e. bi-directional) channel data links which are continuously subject to testing so that when any interruption in communication link occurs an alarm signal is generated (abstract). Anand invention requires constant ready state (see background---columns 1-4). Anand column 5 indeed reveals "continuously" testing data link but fails to show testing within the switch. The Examiner notes that it would have been obvious for any one of ordinary skill in the art at the time of Anand invention to use "wireless" link when notifying alarm center of link (i.e. wireline) failure.

### ***Conclusion***

**3. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

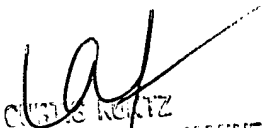
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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barry W. Taylor whose telephone number is (703) 305-4811. The examiner can normally be reached on Monday-Friday from 6:30am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on (703) 305-4708. The fax phone number for this Group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Technology Center 2600 customer service Office whose telephone number is (703) 306-0377.

  
CURTIS KUNTZ  
SENIOR PATENT EXAMINER  
TECHNOLOGY CENTER 2600